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ANNUAL REPORTS  
FOR  
YELLOWSTONE NATIONAL PARK

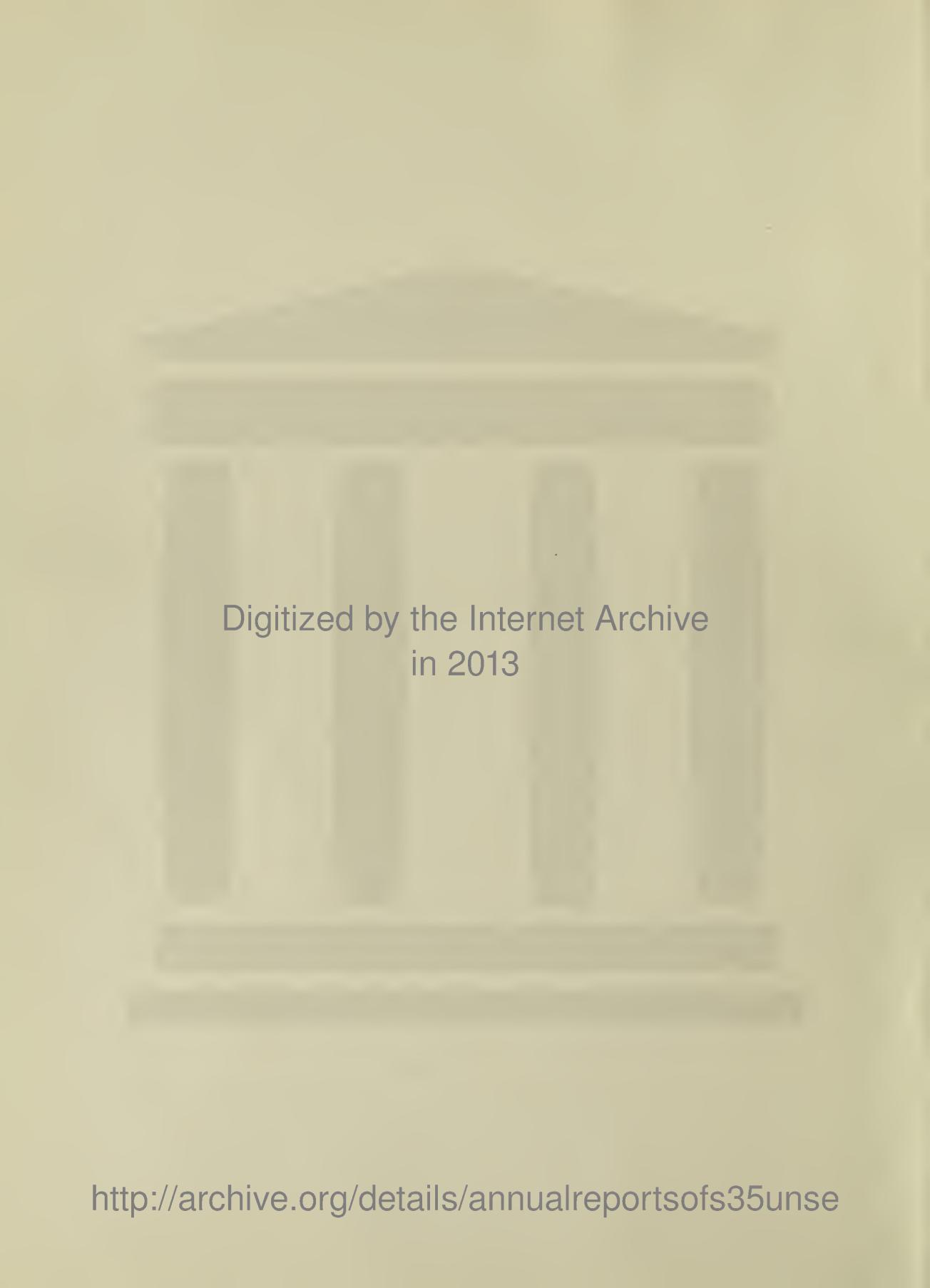
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YELLOWSTONE  
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A very faint, large watermark-like image of a classical building with four columns and a pediment is visible in the background.

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ANNUAL REPORT  
FOR  
YELLOWSTONE NATIONAL PARK

1935



ANNUAL REPORT  
YELLOWSTONE NATIONAL PARK

During the years 1927-1928, and 1931 to 1934 on account of a shortage of funds it was not possible to include the reports of the various superintendents in the annual report of the Director of the National Park Service, and the reports were mimeographed. Again in 1935, the shortage of funds makes mimeographing necessary.

Fifty copies of the Yellowstone Report have been prepared for distribution to collectors who have the Yellowstone reports since the first issue, and to others who are interested in having copies for reference purposes.

The illustrations in this issue are the work of William E. Kearns, Junior Park Naturalist.

Roger W. Toll  
Superintendent



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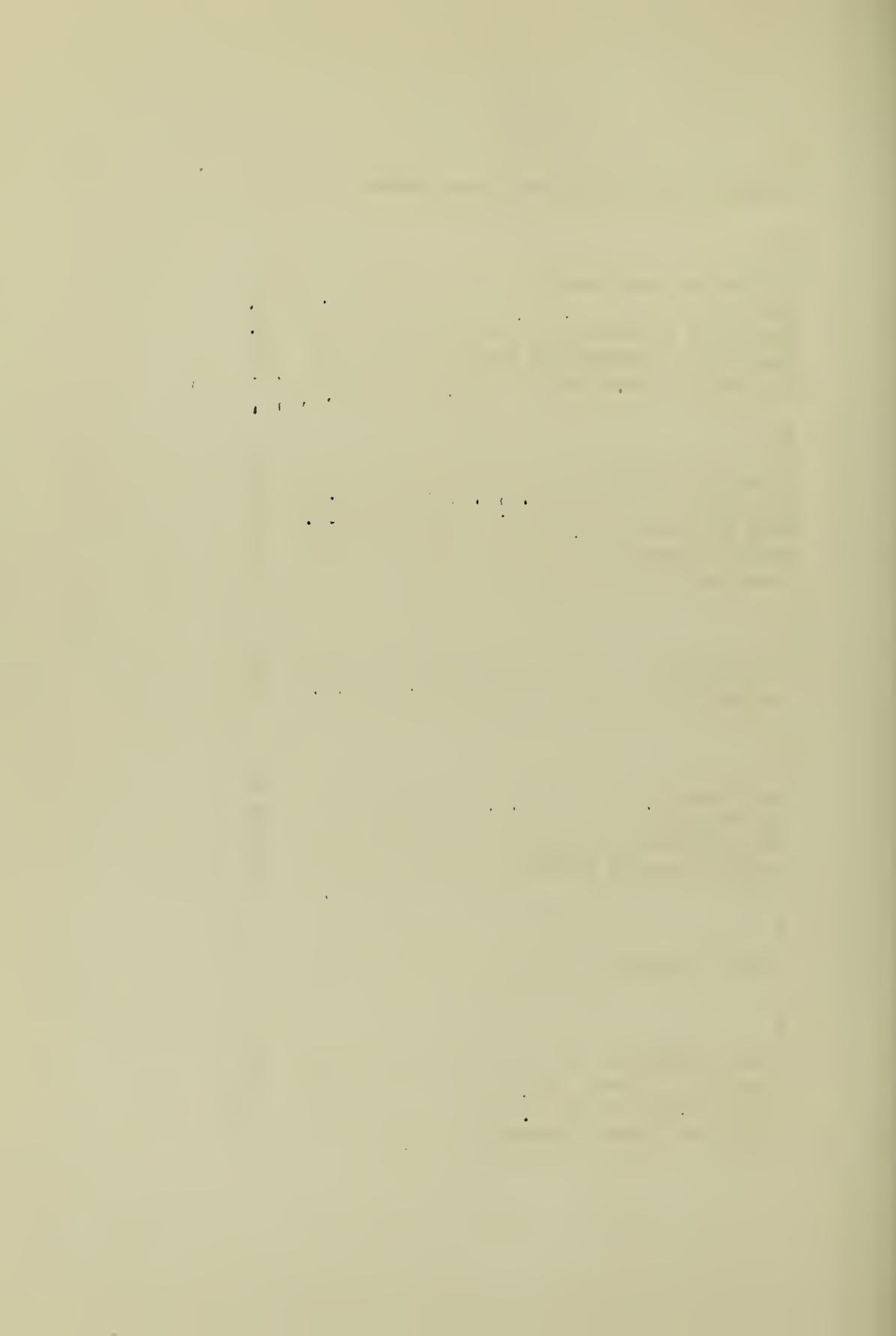
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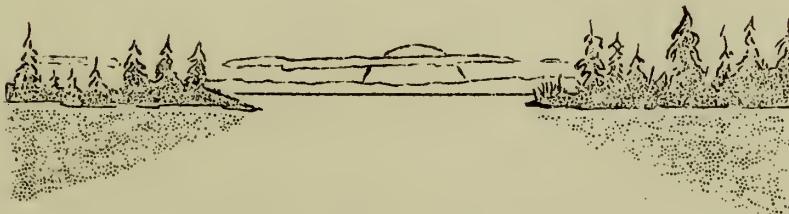
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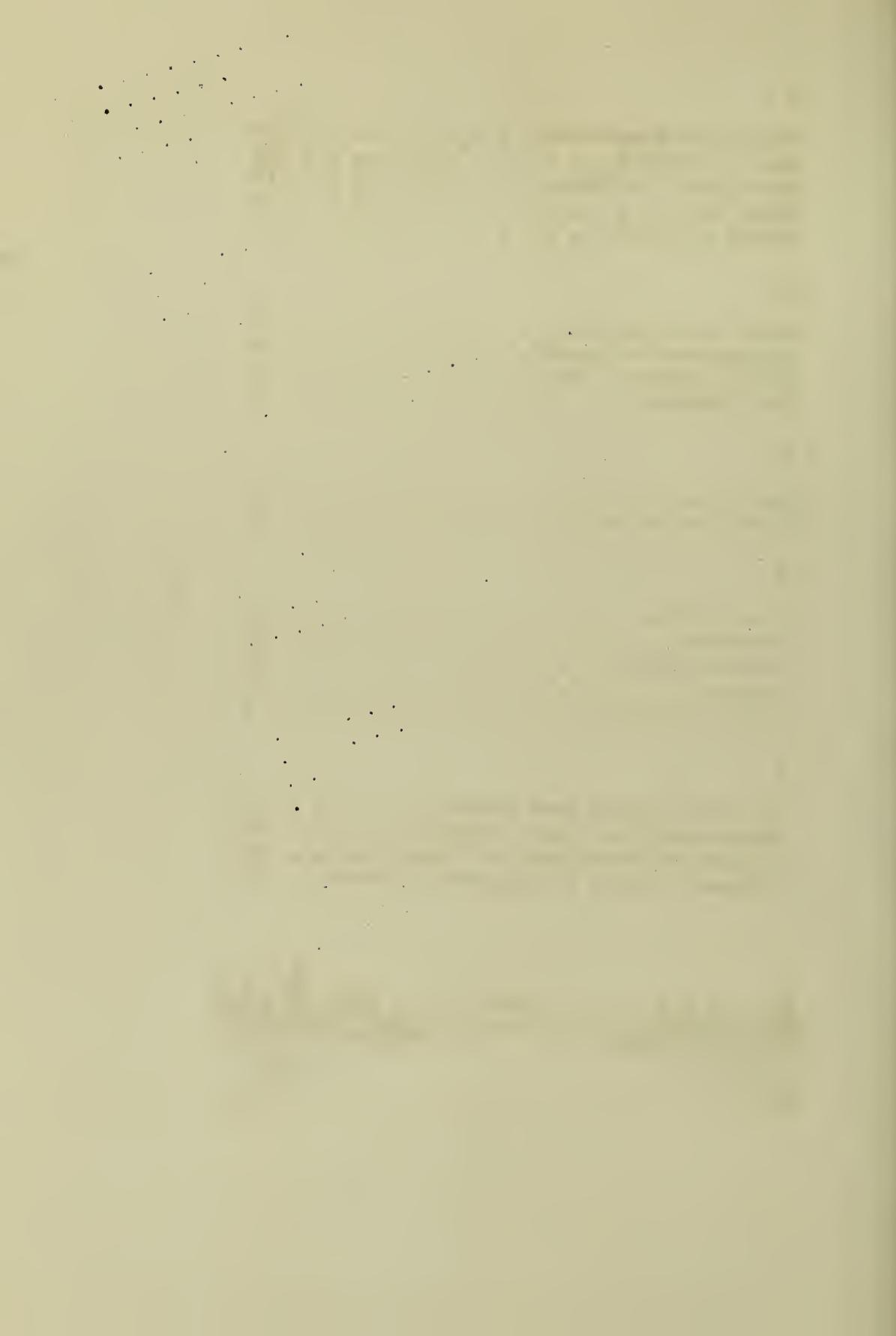
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ANNUAL REPORT FOR YELLOWSTONE NATIONAL PARK

1935

Roger W. Toll, Superintendent

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GENERAL

Up to 1934 the reports of the Superintendent of Yellowstone Park have covered the construction season and included the period from October 1 to September 30. The 1934 report covered the period from October 1, 1933 to June 30, 1934 and succeeding reports are to cover the fiscal year periods. This report, therefore, for 1935 covers the fiscal year, July 1, 1934 to June 30, 1935.

The increase in travel which was evidenced at the beginning of the 1934 season continued throughout and by the end of the travel year the previous record, established in 1929, was broken. A total of 260,775 visitors were registered at the park gateways as against 260,697 in 1929. While being a few over the 1929 mark, there were registered 98,837 people in excess of the number registered in 1933, or an increase of 61 per cent. Rail travel likewise showed an increase, there having been recorded 14,085 as against 6,787 for 1933.

When the roads were opened to travel on May 15 this year and we began collecting the regular entrance fee, the post-season and pre-season travel was considerably below the previous year. However, by the end of June there had been a steady increase, about 10 per cent for the month, and the total travel was only 5,000 behind the same period last year. Indications are that the heavy travel in June will continue throughout the season and there is little doubt but that the total travel for the season will exceed the previous record year.

The mild fall weather permitted late travel and the roads to Old Faithful and West Yellowstone as well as to Canyon and Lake were open throughout the month of November. The south and east entrances were closed on November 19. The contractor on the Firehole Cascades-Old Faithful road worked as long as weather conditions would permit and it was not until December 26 that it was necessary to send in a snowplow to help remove the crew. We continued the collection of the entrance fee until November 10, approval having been received from the Director to discontinue the collection of the fee until May 15, 1935.

Because of the very backward spring with much snow and rain throughout March and April, the roads were slow to open this year and motorists were not admitted until the fifteenth of May. Last year

the north, west and east entrances were all open before May 1 and motorists were admitted on that date while the south entrance was open to travel on May 19. This year only the north and west gates were cleared of snow so as to admit motorists by May 15 and it was not until the twenty-sixth of May that the east entrance was open to travel. The Dunraven Pass road opened to travel on June 3, Old Faithful to Thumb on June 15, and the south entrance began admitting motorists on June 15. The Mount Washburn road was not open by the end of June nor was the Red Lodge-Cooke highway.

The increase in travel in 1934 naturally had its effect on the increase in business of the operators and all operations showed a substantial gain. At Tower Falls Camp Roosevelt is operating with lodge and housekeeping cabin accommodations. Supplies are also available at a small general store operated by the Haynes Picture Shops, Inc. in connection with Camp Roosevelt.

The C. A. Hamilton Stores continued to take care of late fall visitors for meals and lodgings at Old Faithful and Lake until October 24 as well as to provide these accommodations for early visitors beginning May 15 when the north and west gates were first opened.

The fishing season opened on May 26 but because of the high water early fishing was not especially good, although near the end of June fishermen were reporting excellent catches in most of the park streams and lakes. Fishing has been very good in Yellowstone Lake and in the Yellowstone River between Lake and Canyon. A check of visitors leaving the park showed 22,772 fish caught to June 30 as against 36,427 to the same date last year.

The Lake Hotel remained closed for the 1935 season but one wing of the Mammoth Hotel was operating to take care of those seeking over-night accommodations at Park Headquarters. The Mammoth Hotel has been closed during two previous seasons while this is the third season the Lake Hotel has not been operating. Special weekly and monthly rates have been approved for hotels and lodges.

Several small fires were reported during the season of 1934 but fortunately there were no fires of any great magnitude despite the fact that the summer was hot and dry and a serious fire hazard existed throughout most of the season. The heavy snowfall during March, April, and May and the late spring aided the fire situation at the start of the 1935 season.

The desire of road contractors to work their crews as late

nto the fall as was possible aided in relieving the unemployment situation in the immediate vicinity of the park, some of the crews being held on until after the middle of December. The letting of the contract on the apartment house to Frank B. Anderson of Denver and his starting to work on this contract early in the spring provided some early employment as did also the Mammoth-Lava Creek surveying job. As soon as the roads were open and the contractors were able to get to their jobs, opportunity was afforded men in the adjoining states to secure employment and by the end of June a considerable number of men had been placed on the payrolls of the government, park operators, and contractors. The apartment house building is the first structure to be built at Mammoth since the park has been administered by the National Park Service. It will contain 20 apartments and will help to relieve a very bad housing situation which has been in evidence at park headquarters for a number of years.

The National Reemployment Service established an office in the park in March and quarters were furnished in the old barracks building. The office is to act as a placement office and not an employment office, the men to be selected for work to be based on 0 per cent for Montana, 40 per cent for Wyoming, and 20 per cent for Idaho. The office is under the direction of Richard H. Thomas of Casper, Wyoming.

Guy D. Edwards, Assistant Superintendent of the park departed on July 8 to take charge of the Grand Teton National Park vice Sam T. Woodring, Superintendent, resigned. On September 1 Mr. Edwards was officially appointed as Superintendent of Grand Teton National Park and J. W. Emmert, formerly Assistant Superintendent of Yosemite National Park, succeeded Mr. Edwards as Assistant Superintendent of the Yellowstone. He reported to the park on September 13.

During the summer Chief Ranger Baggley acted as Assistant Superintendent and Assistant Chief Ranger Francis D. LaNoue was designated as Acting Chief Ranger. On December 10, 1934, Chief Ranger Baggley left for Washington for a special assignment under ECW and was later placed in charge of the Wildlife Division of State Parks under ECW. Assistant Chief Ranger LaNoue assumed the position of Acting Chief Ranger during Mr. Baggley's assignment or the period of the emergency. Park Ranger Frank W. Childs left in May for a special assignment under ECW in Washington leaving us short handed in our permanent ranger organization.

A series of ten stamps, depicting scenes in the various national parks, was placed on sale in the post offices throughout

the country during the summer of 1934, the first Yellowstone stamp being sold at the park post office at Mammoth Hot Springs on July 30. The Yellowstone stamp is the 5-cent denomination and bears a likeness of Old Faithful Geyser, the model being the famous F. J. Haynes picture of the geyser. More than 85000 requests were received for the first day cancellation of this stamp and it was necessary to add ten more clerks to handle the volume of business resulting from the sale in the park. Hon. James A. Farley, Postmaster General, was in the park to handle the first sale which was made to Hon. Joseph C. O'Mahoney, United States Senator from Wyoming. Senator O'Mahoney presented several of the stamps to Mr. William H. Jackson, 91 year old pioneer and photographer of the famous 1871 Hayden Survey party, who donated the stamps to the Yellowstone Museum. Following the sale at Mammoth Messrs. Farley and O'Mahoney proceeded to Old Faithful and conducted the first sale from that station.

On June 5 advice was received that the Director had approved the sale of alcoholic liquors in the park, which permits the sale of package goods in the stores, hotels and lodges and by the drink in the hotels and lodges. New wine rooms have been installed in the hotels and lodges and some remodeling was necessary in the stores to take care of this new enterprise. This is the first time since 1916 that liquor has been permitted to be sold in the park. The Wyoming liquor laws are applicable and there are to be no sales made on Sunday nor is liquor to be sold to minors under 21 years of age.

A serious accident resulting in the death of Mrs. J. J. Perry of Billings, Montana occurred at Golden Gate on August 19, 1934. The car was driven by Mrs. Ethyl M. Polentz and contained her mother, Mrs. Perry and her daughter and a Mrs. William Miles of Los Angeles, who later died in a Los Angeles hospital, after having spent some time in the Park Hospital. Mrs. Polentz and her daughter were both injured but not seriously.



ADMINISTRATION

Personnel: The permanent personnel consists of Roger W. Toll, Superintendent; John W. Emmert, Assistant Superintendent; Joseph Goette, Assistant to the Superintendent; Benjamin A. Hundley, Chief Clerk; Francis W. Watson, Agent-Cashier Clerk; Keith Neilson, Senior Clerk and Bookkeeper; Verna M. Roe, Clerk-Stenographer; Virginia Goettlich, Clerk-Stenographer; William H. Katus, Timekeeper; Jerry Tonini, Voucher Clerk; Edwin C. Stevens, Clerk in Chief Ranger's office; Fred G. Bussey, Clerk-Stenographer. This force is augmented during the summer season with two clerk-stenographers, one statistical clerk, one publicity clerk and one card clerk. Also, one stenographer, R. Edgar Dansie, assigned to the superintendent during the winter at his headquarters office in Denver on work in connection with inspection of proposed parks and monuments, is transferred to the park during the summer season. The maximum number of employees on the payroll at one time was 545, consisting of 72 permanent and 473 temporary employees.

Several changes were made in the administrative personnel during the fiscal year, Assistant Superintendent Guy D. Edwards being transferred to the superintendency of Grand Teton National Park and J. W. Emmert, Assistant Superintendent of Yosemite National Park superseding him as Assistant Superintendent of the Yellowstone. Both of these appointments became effective September 1, 1934. Senior Clerk Parke Soule resigned effective at the close of December 16, 1934 to take a position with the Alcoholic Tax Unit of the Internal Revenue Bureau of Denver. Clerk Keith Neilson was promoted to Mr. Soule's vacancy. Clerk Constance Whitney was transferred to a similar position in Hawaii National Park effective February 10, 1935, Mr. Jerry P. Tonini being promoted to her vacancy. Clerk R. Edgar Dansie was selected to fill Mr. Tonini's position. Miss Virginia Goettlich was changed from the Timekeeper Clerk position to File and Personnel Clerk. Mr. Fred G. Bussey, Clerk from Mt. Rainier National Park, was transferred to Yellowstone and reported for duty April 27, 1935. Wilfred J. Mead, Janitor, resigned at the close of April 15 to assume a position as Curator in Morristown National Monument in New Jersey.

Superintendent Toll was called to Washington to aid in preparing a report on the recreational resources of the country and left on August 25. Throughout the winter he was in Washington, Florida and Denver on work in connection with this recreational resources report and in the inspection of proposed parks and monuments. He returned to the Yellowstone on April 29.

Appropriations: Appropriations for the fiscal year 1935 are as follows:

45433 Yellowstone National Park, 1935	\$354,865.00
45406 Forest Protection & Fire Prevention, 1935	2,860.00
45405 Emergency Reconstruction & Fighting Forest Fires, 1935	8,444.22
4x391 Roads and Trails, National Parks, Emergency Construction Act, June 19, 1934	629,086.00

Revenues for 1935 Fiscal Year: Revenues aggregating \$233,428.49 were received from the following sources during the fiscal year and deposited in the Treasury of the United States as Miscellaneous Receipts:

Automobile and motorcycle permit fees	\$179,624.00
Franchise and permit fees	50,103.28
Electric current	2,674.60
Water	126.60
Miscellaneous	900.01

#### NATURALIST DEPARTMENT

There has been no change in the permanent staff of this department during this period. The permanent staff as of June 30, 1935 consisted of:

Park Naturalist	C. Max Bauer
Assistant Park Naturalist	George C. Crowe
Junior Park Naturalist	William E. Kearns

The summer staff for June, 1935 consisted of 17 ranger-naturalists, 1 clerk-stenographer, and 3 laborers or museum caretakers. Three ranger-naturalists were designated as senior ranger-naturalists in order that they might supervise the activities during the summer season at Fishing Bridge, Old Faithful and Mammoth Hot Springs museums. On July 1, 1935 2 ranger-naturalists were added, so the staff during the summer season this summer will consist of 19 ranger-naturalists.

All museums were closed to the public on September 20, 1934. The opening dates for the museums in June, 1935 were as follows:

Mammoth Museum	June 5
Norris Museum	June 16
Madison Museum	June 16
Old Faithful Museum	June 16
Fishing Bridge Museum	June 16

The daily hours for each museum are as follows:

Mammoth Museum	8 a.m. to 8 p.m.
Norris Museum	8 a.m. to 5 p.m.

Madison Museum	8 a.m. to 5 p.m.
Old Faithful Museum	8 a.m. to 9:30 p.m.
Fishing Bridge Museum	8 a.m. to 8 p.m.

Five outdoor amphitheaters are in use; one at Mammoth Camp Ground which will seat 200, one at Madison Junction Museum which will seat 75, one at Old Faithful Museum which will seat 800, one at West Thumb which will seat 125, and one at Fishing Bridge museum which will seat 700. These outdoor amphitheaters are used each evening to give campfire talks on natural history and history subjects.

This season it became necessary to construct another outdoor amphitheater at the Canyon camp ground. This amphitheater has been planned and it is hoped that within another month it may be completed. Beginning with this season we removed all ranger-naturalist programs from the lodges and the hotels so that, at present, we have no program in any of the operators' buildings. We believe this to be an improvement as the visitors now have a choice as to whether they will attend the naturalist program around the campfire or a "savage" program in a lodge.

Further work was carried on in the Headquarters Museum in the filing of negatives and photographs, the pasting of herbarium specimens, classification and cataloging of library books, the building of an herbarium cabinet, the addition of an extra slide filing cabinet, the addition of numerous shelves and cabinets to the storage rooms, and accessioning of exhibit materials for the museums. The installation of the Firehole Canyon Field Exhibit was completed.

Other projects included: editing of the ranger-naturalist manuals with the idea of preparing a new volume, the study of place names of Yellowstone Park, and the placement of a ranger-naturalist and lookout on Mount Washburn.

The development of the pre-season activities for ranger-naturalists and temporary rangers, which included a trip around the Loon and instructions regarding the features of the Park and duties to be performed. This year this activity proved very satisfactory.

Continuation of special service to conventions and groups of teachers and students by the Naturalist Department.

Securing motion picture camera and telephoto lens for taking wildlife pictures has facilitated this work greatly this year.

Arthur Howard has continued his research into the geology of the Tower Falls region and the Grand Canyon of the Yellowstone.

Cooperation with the Princeton School of Field Geology was extended.

The use of several CCC enrollees to assist in museum work and to train them in special lines of museum preparation and photography.

Activities from July 1, 1934 to June 30, 1935, incl.

	Field Trips:		Lectures		Museum:		Auto Caravans		Sp. Parte		
	No.	Att.	No.	Att.	No.	Att.	No.	Cars	Att.	No.	Att.
Canyon	:274:	46404:	148:	69140:	: 51:	865:	2929:	14:	17:		
Fishing Bridge	: 85:	1585:	320:	41436:	53641:	66:	392:	1424:	17:	8:	
Madison	: 5:	109:	365:	15963:	29907:	:	:	:	16:	5:	
Mammoth	:482:	14036:	178:	16752:	74305:	106:	1866:	6312:	29:	10:	
Mt. Washburn	: :	:	:	18323:	:	:	:	:	:	:	
Norris	:281:	10100:	:	:	41538:	:	:	15664:	3:	1:	
Old Faithful	:173:	19743:	214:	126129:	117327:	86:	4422:	:	39:	8:	
West Thumb	:228:	11253:	69:	8815:	:	:	:	:	6:	1:	
<b>TOTAL</b>	<b>1528:</b>	<b>103230:</b>	<b>1294:</b>	<b>296558:</b>	<b>316716:</b>	<b>309:</b>	<b>7545:</b>	<b>26329:</b>	<b>124:</b>	<b>138:</b>	

TOTAL CONTACTS, July 1, 1933 to June 30, 1934, inclusive 481,703

TOTAL CONTACTS, July 1, 1934 to June 30, 1935, inclusive 756,415



PROTECTION DEPARTMENT

General: The regular protection department activities, in addition to numerous emergency activities, have been carried out throughout the entire year. The Protection Department has been called upon to contribute more than any other department toward the administration of emergency work such as trail construction, insect control work, land acquisition, and various ECW projects. A great deal of time has been spent on special game management and game study problems aside from the regular routine patrols and game feeding work. The majority of the winter activities of this department were directed toward the management and reduction plan for the Northern Yellowstone elk herd. The activities during the summer seasons have consisted of forest protection, game study and observation, law enforcement, and protection of natural features of the park. Both summer and winter activities have been somewhat handicapped by the fact that we have been working without our full quota of permanent personnel. There has been a considerable turn-over in the permanent ranger personnel in the past year, there having been two transfers to emergency positions in addition to one transfer to another park, one transfer to the Forest Service, and one retirement, which have become effective during the past year. Both summer seasons to date have been seasons of high fire hazard which have demanded a considerable amount of protection department time for the suppression and pre-suppression of forest fires.

Personnel: The Protection Department personnel consists of Acting Chief Ranger Francis D. LaNoue; one assistant chief ranger, George W. Miller; three acting assistant chief rangers, Maynard Barrows, Albert E. Elliott, and Curtis K. Skinner; twenty-three permanent rangers; twenty-eight temporary rangers; one chief buffalo keeper; one assistant buffalo keeper; one buffalo herder; and one night watchman, who is assigned to Mammoth. Chief Ranger George F. Baggley has been assigned to emergency work since December, 1934 and Assistant Chief Ranger Childs has been assigned to emergency work since May, 1935. Assistant Chief Ranger Fred T. Johnston has been absent during the entire year, assigned to ECW work in Washington. Assistant Chief Ranger George W. Miller has been assigned to the supervision of ECW work within the park during the entire year and has not been available for regular protection department duties.

Winter Activities: The protection department winter activities consisted of the regular protection patrols for the observation and protection of game animals and other natural features, feeding of game animals, game management, forest nursery planning, supervision of ECW projects, land acquisition work, the handling and care of Park Service horse herd, and reduction and management of the Northern Yellowstone elk herd. The protection patrols have

included such work as maintenance of telephone lines, removal of snow from government and operative buildings, patrols for the apprehension of poachers and for various other special game observation purposes.

Summer Activities: The protection department summer activities have consisted of law enforcement, contacting and entertaining special visitors, information service to the public, checking traffic at entrance stations, fire prevention and control, construction and maintenance of trails, repairing and maintaining of snowshoe cabins, supervision of ECW projects, game management studies (which includes control of destructive bears and other forms of wildlife), supervision of insect control, supervision of the construction and maintenance of the forest nursery, locating and delivering of messages to persons travelling within the park, and various other duties concerned with the general protection of the flora, fauna, and natural features of the park.

Both the 1934 and 1935 travel seasons have been the largest in the history of the park, the 1935 season surpassing that of 1934 to date. With the increased burden of supervising the numerous ECW projects and other emergency work and the increased law enforcement problems, arising from the unusual number of employees who are working for construction contractors in the park, together with the shortage of personnel and motorized equipment for proper protection patrols, the protection department has been seriously handicapped in its summer activities.

Forestry:

Insect Control: During May and June of 1935 one insect control project in the vicinity of Mammoth was in progress. The purpose of this project was to control an infestation of mountain pine beetle in the white bark pine in the auto camp and on the Mammoth Hot Spring Terraces in the vicinity of Park Headquarters. This work was accomplished with the use of CCC enrollees and "C" organization under the direction and supervision of the protection department. No other insect control measures were instituted during the past year.

Nursery: A forest nursery was started this year and is now in the process of construction in the vicinity of the Game Preservation Ranch. This project was started under a PWA allotment, and considerable progress has been made. Several seed beds have been completed and planted, and considerable work has been accomplished toward the establishment of a shelter belt and in the general cultivation and utilization of the area set aside for nursery purposes.

Type Mapping: Two type mapping crews were started to work early in the spring of 1935, and are now making rapid progress toward the completion of a type map for the entire Yellowstone Park. Both crews were somewhat handicapped by the heavy snow conditions which they met with when their work was first started this spring. However, fine progress has been reported at all times and it is hoped that this project will be completed during the 1935 season. This project is being accomplished under a PWA allotment.

Fire Protection: Extremely dry weather conditions have prevailed throughout the entire summer season of 1934 and up to date of this season, causing an acute fire hazard. Precipitation has been considerably below normal even during the winter months, and the accumulated snow fall has gone off quickly with the mild weather experienced in the early spring. Twenty-six class "A" (less than 1/4 acre), five class "B" (1/4 to 10 acres) and four class "C" (more than 10 acres) fires have occurred during the past year as compared with 29 class "A", 11 class "B" and 5 class "C" fires for the fiscal year 1934. With the improvement of our fire detection plan and the aid of CCC enrollees in our fire organization plan, it has been possible to keep the majority of the fires which have occurred at a minimum size. Nearly all of the class "C" fires were caused by lightning and were in remote regions where they gained considerable headway before it was possible for a crew to reach them. During the past year we have had six CCC camps organized for fire emergencies during the fire season. Lectures and instructions were given to the enrollees of each camp and the camps were organized into flying squadrons of 50 men, with two follow-up crews of 40 men each. A number of CCC enrollees have been attached to the various ranger stations throughout the park to act in the capacity of smoke chasers in case fires are reported. They have been of invaluable aid in this capacity, and in numerous cases have prevented small fires from increasing to considerable size because of their prompt action, and because of the fact that they were immediately available for fire suppression duty.

Buffalo Ranch Activities: The Buffalo Ranch activities consisted of the feeding and management of the buffalo herd and the raising and cutting of hay for the winter food supply. Other activities consist of the maintenance of buildings, corrals, and machinery necessary for the ranch operation. During the months of December and January the buffalo herd was reduced by 264 head. Ninety-six head of these were shipped alive and 168 were slaughtered, and the meat distributed to various Indian agencies. A total of 600 buffalo were maintained on the winter feeding ground during the past winter, with a total amount of 480 tons of hay being fed, as compared with 121 tons of hay for last year. Again during the past winter some 150 head of buffalo successfully wintered on Pelican Meadows without the aid of artificial food.

Hay Ranches: Following are the comparative figures for the amount of hay fed to game animals at the various ranches during the past year: one hundred forty tons of hay were fed to the elk on the Slough Creek Ranch as compared with 48 tons for the year before. About 22 tons of hay were used from the Gardiner and Game Preservation Ranches for the purpose of trapping elk for slaughter and shipment during the past winter. No hay was fed from either of these two places the year before. At the Yancey Ranch about 35 tons of hay were cut last season and used for the maintenance of the Park Service horse herd during the winter months.

Predatory Animals: One hundred ten coyotes were killed this year as compared with 140 last year. The fact that more coyotes were not killed is attributed to the extension of the hunting season along the north boundary of the Park, which enabled coyotes on the northern game range to find a considerable amount of food for subsistence in the refuse from elk carcasses in the areas open to hunting adjacent to the park. Also, mild weather during the early part of the winter made conditions favorable for coyotes to hunt in the high mountain ranges and high windswept ridges instead of forcing them down into the areas where game was concentrated and where the predators would be killed. An order issued by the Director under date of November 12, 1934 prohibits the further control of predators without written permission from Washington, so for the immediate future coyotes will be killed only when they appear in localities near swan nesting areas and when specimens are desired for scientific investigations.

Wildlife in the Park: All game animals in the park with the exception of elk came through the winter in very good condition. The early part of the winter was mild and open and although the food supply was scanty in most regions of the winter game range, elk were able to scatter out over sufficient territory to maintain themselves in very good condition until the heavy snows came early in the spring. At this time a large percentage of the northern elk herd had already started to move in the park to higher altitudes where food conditions were more favorable, and many of them were caught in the heavy spring snows, and consequently starved to death. The reduction of the Northern Yellowstone elk herd aided materially in preserving the winter elk range, and caused a more even distribution of the range to the remaining animals after the reduction program had been completed.

Bears, Black: A total of 76 bear incidents, composed of 28 bear injuries and 48 damages, have been reported this year, as compared with 140 for last year. The control of undesirable bears, that is, those which repeatedly cause property damage or injuries to persons, is resulting favorably toward decreasing the number of bear incidents reported each year. The reduction of these undesirable bears has not seemed to affect the number of black bears to be seen to any great extent, and they are at all times quite numerous along the highways, in the auto camps throughout the park, and at the bear feeding grounds.

Bears, Grizzly: No control or management measures have been instituted toward the grizzly bears, except in cases where certain grizzlies enter the auto camps and are considered a menace and hazard to camps and park visitors. Two female grizzlies were shipped out of the park during the past year, one to the Minneapolis Zoo and one to the zoo at Houston, Texas. Park visitors have been given an opportunity to witness a splendid and spectacular show each evening at the Canyon and Old Faithful bear feeding grounds. Each year more bear are reported at the feeding ground at Canyon and the high count for this year has been 48 in one night as compared with 38 for the previous high mark.

Mountain Sheep: An intensive survey study of the mountain sheep herd was carried on throughout the past winter and it was discovered that the mountain sheep herd is slowly increasing. These animals are of much interest to park visitors during the summer months, especially because the total number in the U. S. is decreasing each year. A number of years ago the mountain sheep herd in Yellowstone Park was estimated at 500 head, but due to disease and various other factors the herd was reduced to about 100. An actual count taken last winter revealed some 250 head now in the park.

Elk: The elk, more than any other of the game animals, suffered from a shortage of forage and severe winter conditions during the months of February and March. Unusually warm weather during the month of January caused the snow to melt off of a considerable portion of the winter range and recede to regions which would not normally be free of snow until late in March. Numerous elk drifted back up to the higher range which thus became available and when heavy snows fell in February and March many of them starved to death or winter-killed from exposure. The winter-kill, however, was not more than could have been expected in a normal year because previous mild winters had permitted numerous old and weakened animals to outlive their normal life span, as measured under conditions which exist in the park.

Due to the fact that the winter game range was seriously depleted and overgrazed, it was decided that, in order to insure the future production of winter forage for all game animals, the elk herd should be reduced by some 3000 head. This reduction was accomplished through live shipments of 375 head, hunters kills amounting to 2,567 head, slaughtering of 223 head within the park, and 100 miscellaneous deaths.

A game count for the purpose of determining the number of elk remaining on the northern range, after the reduction program, was held during the early spring. The elk count was accomplished by a

combined ground and airplane count. The count from the air revealed a number of animals on the high ridges and ranges which would not have been observed by the men on foot, who counted the elk in the lower valleys, which constitute most of the available winter range. The total elk count revealed that approximately 10,000 head remained in the northern herd after the reduction program. It is estimated that about 1,000 head of these animals died after the count was made, which would leave approximately 9,000 head before the 1935 calf crop appeared.

The following table shows the counts and estimates of game animals:

	Actual Count		Estimated		Increase		Condition	
	1934	1935	1934	1935	1934	1935	1934	1935
Antelope	:	:	:	:	:	:	:	:
Buffalo	:	321	:	530	:	700	:	750
Deer	:	950	:	830	:	1000	:	*1000
Elk:	:	396	:	---	:	850	:	800
Northern Herd	:	10647	:	10112	:	13000	:	10000
Gallatin	:	1053	:	1140	:	2000	:	2000
Interior Park	:	No count	:	No count	:	700	:	500
Mountain Sheep	:	180	:	250	:	190	:	300
Moose	:	No Count	:	No count	:	700	:	750
Bears, Grizzly	:	125	:	80	:	260	:	250
Bears, Black	:	325	:	244	:	525	:	500

\* Includes 1935 calf crop of 125 head.

Waterfowl: Numerous waterfowl of various species were observed throughout the entire year in certain sections of the park where the presence of hot springs prevents the streams and lakes from freezing over during the severe cold of the winter season. The most noteworthy of waterfowl observed was the trumpeter swan. Considerable work has been done toward the perpetuation of these birds. Every precaution has been taken to protect their nesting grounds from the disturbance of persons and from marauding animals. The number of pairs of trumpeter swans that have been observed nesting in the park this year is larger than ever before. One pair found nesting on Swan Lake was given some added protection from predatory animals by the construction of a dam across the outlet of the lake, which would maintain the water level throughout the nesting period so that the island upon which they were nesting would remain separated from the shore.

Fish Planting: The collection of black spotted trout eggs at the Yellowstone Park hatchery, which is operated under the direction of the U. S. Bureau of Fisheries, was considerably delayed this year because of the late spring and the resulting snow and ice conditions in Yellowstone Lake and other waters where black spotted eggs are collected. At the close of this fiscal year the spawning season for black spotted trout was not yet over, consequently we do not have the complete figures for the 1935 egg take. The total number of black spotted eggs taken through June 30 amounted to 17,546,000, which was considerably less than for the same period of operation during last season. The spawning of grayling was completed by June 30 with a total take of 3,660,000 grayling eggs, which is about 1,000,000 less than the number taken last year. Four million three hundred forty-three thousand three hundred twenty were taken last year. Due to the incomplete status of figures for fisheries' operations for this year we will not at this time be able to make a final report on this operation.

Fishermen have had comparatively good luck during this year, and some fine catches have been reported from many waters in the park. The late spring season of 1935 has caused all of the fishing streams to remain high and muddy up to date, and fishing so far this season has been comparatively poor.



ENGINEERING DEPARTMENT

Engineering activities are carried on under the direction of Park Engineer C. A. Lord. To this division is delegated the supervision of all road and trail maintenance, the maintenance of approach roads, surveys and the preparation of plans for force account road and trail construction, supervision and inspection of the construction of physical improvements, and all general engineering assistance required by other departments.

Park forces carried on road maintenance over a highway system of 382 miles, 328 miles of which are within the park boundaries and 54 miles comprising approach roads to the south and east entrances. Twelve miles of the east approach road were placed under contract for reconstruction early in 1935 and work is now well under way. That portion of the system within the park limits is divided into 210 miles of main loop and entrance connections, 52 miles of subsidiary or side trip sections, the balance of the mileage comprising service roads serving the various utility areas, both Government and public operators. General maintenance of all roads is carried on from 17 section camps, 15 located within the park and one each on the two approach roads.

Major road construction projects under way or opened up during the year totalled 165 miles, representing as to stages of construction, 80 miles of grading, 29 miles of surfacing, and 56 miles of oil mat surfacing. Approximately 16 miles of grading and 26 miles of surfacing were completed during the period and most of the balance of the mileage listed will be completed by the close of the 1935 working season.

Only two force account construction projects were carried on with allotments from regular park appropriations. These were the post-construction maintenance of the Tower Junction-Lava Creek road section after its acceptance from the contractor, and the erection of the Elk Creek suspension bridge.

The post-construction work involved spot surfacing with pre-mixed oil material, grade stabilization, sub-surface drainage, roadside cleanup, and slide removal.

The Elk Creek Bridge is a steel suspension structure, 228 feet between towers, spanning the Yellowstone River near the mouth of Elk Creek. This bridge is 120 feet above the low water level of the river and was constructed to facilitate the movement of fire fighting forces and equipment into the Hellroaring district and to render this section more accessible, both from Tower Falls and the headquarters area at Mammoth.

Twenty-two construction projects financed from Public Works allotments, including roads and trails and physical improvements, were opened up and a brief description of each is given below.

Opening of the Red Lodge-Cooke road necessitated the construction of a ranger station and a checking station for the Northeast Entrance. These buildings are of log type, located on the main highway and replace the obsolete structures on the abandoned road. Work was carried on by contract and is now about 60 per cent complete.

A standard four-horse barn was erected at the Soda Butte Ranger Station. This building is of combination log and frame construction and matches the ranger station constructed during the 1930 season.

Standard log type snowshoe cabins were constructed in the Upper Lamar River district and on the North Boundary. These cabins were built by contract, under Park Service supervision.

Four comfort stations were built in the Fishing Bridge campground area, three of these being built by contract and the fourth constructed by force account. Sewer, water and electrical services to all four buildings were installed by force account.

Campground extension work was carried on at Fishing Bridge, Old Faithful and West Thumb, this work consisting of the construction and installation of camp tables, cooking fireplaces, and garbage disposal facilities.

The Fishing Bridge water system was reconstructed to meet the demands of increased automobile campground space and to provide better fire protection for the various utility units. This reconstruction involved the installation of 6300 feet of six-inch water main and 3500 feet of service laterals, varying in size from four inches to three-quarters of an inch in diameter.

Sanitary facilities, consisting of both water and sewer systems, were installed at West Yellowstone for service to the administrative area at the West Entrance. Water service connection was also extended to the public auto camp.

A buffalo pasture and show corral were constructed on Antelope Creek between Canyon Junction and Tower Falls. The pasture includes approximately 530 acres and the show corral 5 acres, this wire-fenced area being sufficient to maintain a herd of some 30 buffalo in close proximity to the main loop road, so that the grazing animals may be seen in the pasture.

Considerable betterment was carried out over what is known as the Lake Shore section of the Lake to West Thumb portion of the Loop highway. This work consisted of the laying of drainage tile to provide for the run-off of sub-surface waters and the construction of paved gutters to prevent washouts in the event of heavy run-off of flood waters.

Three much needed parking areas were constructed. At the Fountain Paintpot an area was provided for the systematic parking of more than a hundred cars. The general layout provides for a double roadway centering on the Paintpot with an indented parking space on each side of both roadways. A terrace viewing platform of flagstones was constructed along the West side of the Paintpot and the entire hot area enclosed with standard log guard rail. By specially designed widening of the road at the Mammoth Museum a liberal parking space was provided to relieve the traffic congestion that has always taken place at that point. At Fishing Bridge a parking area, very similar in design to that constructed at the Fountain Paintpot is under construction to serve the Fishing Bridge Museum.

Two miles of 22-foot roadway with easy winding curves was constructed to serve the Black Sand Basin thermal area and three miles of roadway in the Firehole Lake Region is under way, the grading being about 50 per cent completed. A short spur road to the columnar formation known as Sheepeater Cliff, about 8 miles south of the Mammoth area, was also constructed. All of these roads are being constructed to present day standards and replace relatively unimproved dirt roads.

A loop footpath was constructed at the West Thumb thermal area and makes all the attractions in that area easily and safely accessible. The path is five feet in width and has a permanent surface of plant mix bitulithic material, sanded with fine local material to make it blend with the formation and yet provide a dustless surface. A short section of similar pathway is under construction in the Norris Basin area.

A two-story apartment building is under construction by contract at Mammoth. It is now approximately twenty-five per cent complete and should be ready for occupancy soon after the beginning of the next calendar year. This building, approximately 80 x 160 feet, will provide six four-room, eight two-room, and six one-room apartments, with garages and general storage room in the basement. On completion, this building will do much to relieve the lack of housing facilities in the headquarters area.

Reconstruction of the water system and hydro-electric plant at Mammoth is now well under way. Twelve thousand four hundred lineal feet of steel penstock is to be laid to furnish water for

the operation of two 300 KW generators. A reservoir covering some four acres will provide a reserve water supply both for power and domestic uses. Installation of the penstock line and remodeling of the existing power house is to be done by contract while all other construction will be completed by Park Service force account.

A forest nursery is being constructed at the Game Ranch about five miles north of Mammoth. Cultivation of the first year's planting area, installation of the irrigation system and the planting of four seed beds is completed.

Plans and designs for the construction of a new water system for the Old Faithful area have been prepared and contracts for its construction will be let during the 1935 season. On completion this new system will provide an adequate water supply for this area.

Approximately 130,000 acres of park lands in the vicinity of Cub Creek, East Entrance, and the Lamar River have been mapped by two type-mapping crews. When recorded and platted this work will give an accurate record of timber distribution as to species and stand, and the extent and value of game forage areas.

Trail construction was carried on in three sections of the park, Heart Lake, Lewis River and the Upper Lamar River. About 20 miles of trail was constructed or reconstructed in the Upper Lamar region, 16 miles from Heart Lake to Trail Creek and the Thorofare Ranger Station, and four miles from the Lewis River road camp to the top of the Pitchstone Plateau. These trails are constructed in accordance with the revised and improved trail designs adopted for the park and will greatly facilitate the movement of fire fighting forces to points of high fire hazard.

#### SANITATION DEPARTMENT

The work of the Sanitation Department is carried on under the supervision of H. B. Hommon of the U. S. Public Health Service and under the direct charge of William Wiggins, Master Plumber.

The work of this department included the installation of water and sewer lines, pumphouses for sewage pumps, electric and gasoline operated sewage pumps, construction of comfort stations, installation of plumbing fixtures, oil burners and furnaces in various buildings, operation and maintenance of refrigerator plants and construction of concrete storage reservoirs. One Hundred and thirty-three tables were built for use in the campgrounds. Twenty-five water systems, 34 sewer systems and 5 incinerators were operated and maintained. Many campgrounds and parking areas were also maintained and operated by this department, also the heating systems at Mammoth, which included the operation of a number of stoves and 14 steam boilers. The department also repaired roofs, iceboxes, stoves, etc.

ELECTRICAL DEPARTMENT

All electrical work, the power plant and radio activities are under the supervision of Chief Electrician Charles D. Dale.

The work in this department during the year consisted of changing two miles of telephone line near Lake Junction and 1-1/2 miles near Old Faithful because of road location; construction of 6 miles of line from Tower Falls to the Buffalo Show Corral on Antelope Creek, 12 miles from West Yellowstone to Grayling Creek, 8 miles from Turbid Lake to Pelican Creek Cabin and 10 miles from the Bechler River to Boundary Creek Cabin; rebuilding 5 miles of the Cooke line from grounded to metallic circuit, and installing cedar poles from the Buffalo Ranch to Soda Butte; razing all telephone wires over road crossing from Mammoth to Norris and making heavy repairs on the power lines at Mammoth. Also, considerable wiring was done in the various buildings throughout the park for the installation of electric ranges, refrigerators, water heaters, flush switches, convenience outlets, etc. Twenty-seven telephones have been added to our telephone system during the fiscal year and 20 additional drons have been added to the present switchboard. Through the assistance of CCC personnel, we have been able to give 24-hour service on the Mammoth switchboard. This became effective in January.

BUILDING MAINTENANCE AND CONSTRUCTION

All carpenter work is under the general supervision of Master Carpenter T. A. Bowman and the painting is under the supervision of Master Painter Lee N. Tompkins.

MECHANICAL DEPARTMENT

This department is in charge of Master Mechanic Robert R. Robinson and includes 6 permanent mechanics, 1 permanent handyman mechanic, 1 blacksmith, 3 temporary handyman mechanics and 1 temporary blacksmith.

The work done under this department consists in the maintenance, repairing and overhauling of all types of motorized equipment and fixed equipment, such as pumping plants, etc. In addition, several hundred small tools are re-conditioned each year.

During the year one  $5\frac{1}{2}$ -ton freight truck, two  $2\frac{1}{2}$ -ton dump trucks and two 1-ton trucks were purchased as well as various small tools, and some shop equipment. Safety First appliances were installed and Safety First instructions given the men in the shops.

EMERGENCY CONSERVATION WORK

During the season of 1934, or the Third Enrollment Period, there were in Yellowstone National Park six CCC companies which were moved to Yellowstone Park from the middle western states, chiefly Indiana and Ohio.

Many worthwhile projects were completed during the Third Enrollment Period although we were handicapped at the beginning of the season by the lack of trucks and small tools, but before the season was over we were well equipped. The work done by these camps included the construction of fire tool cache buildings, erosion control, public campground construction, general cleanup of roadsides and old dumps, and much time was spent by the various camps in fighting forest fires.

Yellowstone was honored during the Third Enrollment Period by a visit from Robert Fechner, Director, Emergency Conservation Work. Mr. Fechner visited all of our EC<sup>W</sup> camps and inspected many of the projects.

During the Fourth Enrollment Period we had only one CCC Company in Yellowstone. Company 1349 was transferred to Yellowstone from Grand Teton National Park at the expiration of the Third Period. This company was composed of Wyoming locally enrolled boys.

Much work and many projects were completed in spite of the severe winter that we had in Yellowstone. No time was lost due to inclement weather during the Fourth Enrollment Period. The entire Game Ranch layout was completed during this period. The work included the reconstruction of a house, construction of a barn, garage and storage shed, the cleanup of the old buildings, the installation of a water system and sewer system and the cleanup and landscaping of the entire area.

Other projects undertaken during this period were: renewing of the Mammoth barn roof, installation of partitions in the EC<sup>W</sup> office space, horse pasture fence construction and preparation of materials as well as many other projects of value.

We have in Yellowstone for the Fifth Enrollment Period six camps but due to a late spring these camps arrived later than usual. Two of the camps arrived on June 1, one on June 2, two on June 3 and one on June 21. Camp YNP #5, Nez Perce was quarantined for scarlet fever for 15 days after its arrival, and remained in quarantine from June 4 and June 19. Camp YNP #1, Mammoth, was also quarantined for scarlet fever from June 16 to June 24, inclusive.

PARK OPERATORS

A large increase in travel had its effect on the business of the operators and the percentage in gain in business was comparable to the percentage in increase in travel. While this travel came as more or less of a surprise the operators were able to accommodate all visitors, although there were a number of times when the house-keeping cabin facilities were taxed to capacity at the larger areas. The hotels and lodges were not filled to capacity, prior to June 30, despite the fact that the Mammoth and Lake Hotels were not operating. Because of the several poor seasons previous to the 1934 season the operators have refrained from making any extensive changes in their operations and facilities although some minor changes were made by the various operators as follows:

Yellowstone Park Hotel Company: At Old Faithful the Hotel Company constructed 3/4 mile of 6-inch concrete tile water line connecting two springs to the Hotel water supply, carpeted 20 rooms, furnished new rugs for entire mezzanine floor, carpeted all halls in the new wing, reupholstered all heavy furniture in the lobby, installed a new bake oven and did whatever painting was necessary to take care of the ordinary wear and tear.

At the Canyon Hotel the company placed new carpets in 15 rooms and re-carpeted the lower hall from the lobby to the telephone exchange, moved barber and beauty shop from basement to main floor, enlarged news stand and discontinued the art shop. Started construction of a new cocktail room for the hotel guests. Also constructed new buffet kitchen with complete equipment, re-upholstered and painted 15 rooms and renovated furniture in 20 rooms, installed new address system in lounge, dining room, and cocktail room, installed new curtains throughout the dining room and re-upholstered all lobby furniture, installed chain grate stoker, coal bin and ash handling equipment and installed vacuum heating system in the lounge and in the new wing.

Yellowstone Lodge and Camps Company: At Mammoth Lodge the Mammoth lobby was re-decorated. Some work was done on the swimming pool and many renewals and replacements were made. In the house-keeping area the main work consisted of painting floors, cabins and furniture.

At Old Faithful Lodge all of the main buildings, and all of the cabins, were repainted and a new comfort station was built. Some new kitchen equipment was installed and minor improvements

were made in the kitchen. In the housekeeping cabin unit the main building and all cabins were repainted, as well as much of the cabin furniture and floors. Large quantities of crockery, such as combinets, wash basins, pitchers and teakettles, were purchased for the tourist cabins, and locks, hasps and inside door bolts were installed. The canvas and frame cabins are being wired for electric lights. In the cafeteria an addition was made, giving approximately 20 ft. x 28 ft. more space for kitchen and pantry. Twenty-eight new tables were added and new kitchen equipment was installed.

At Lake Lodge considerable repair work was done, while in the housekeeping cabin unit, a good deal of work was done repainting cabin floors and furniture. Some of the roads have been gravelled. New crockery was installed in the cabins. Wiring of the canvas and frame cabins for electric lights was under way. At Fishing Bridge Cafeteria certain improvements were made to meet the fire requirements.

At the Canyon Lodge all of the main buildings, dormitories and cabins were repainted and an order was placed for a new chlorinating machine for the septic tank. New kitchen equipment, including a bake oven, was installed and new chandeliers were placed in the dining room. In the housekeeping cabin area the cabin floors and furniture were repainted and gravel was hauled in on some of the roads.

C. A. Hamilton: Hamilton's swimming pool at Old Faithful, completed July 1, 1934, proved very popular and more than 15,000 bathers entered the pool. The patronage of the pool in June, 1935 was 25 per cent ahead of last year.

Pryor and Trischman: Some repair work was done on the general store at Mammoth. Supports under the building, which had become unsafe, were replaced and a partition was removed to give added space and light to the grocery department. The new shelving and cases were installed and the walls of the store covered with celotex. The post office in the Canyon Store was changed to a more convenient space. A partition was removed to give additional space and a new fireplace was constructed.

Yellowstone Park Transportation Company: No additions were made to the transportation fleet or buildings. Work was confined to necessary repairs, painting, etc. to keep all properties in good physical condition. During 1934 a maximum of 104 buses were manned out of a total of 275.

Yellowstone Park Boat Company: Four steel 14 ft outboard motor hulls, one wooden 15 ft. outboard motor hull and two steel 15 ft. 4-passenger inboard motor boats were added. A fish fry pavillion was built on Stevenson Island and a landing dock 4 ft. wide by 50 ft. long was constructed.

COOPERATING BUREAUS

The Bureau of Public Roads, the U. S. Public Health Service, Bureau of Entomology, Bureau of Fisheries, Weather Bureau, Forest Service and War Department have all cooperated to the fullest extent with officials of the National Park Service in Yellowstone Park during the year just closed.

Post Office: Last year's report showed an increase of approximately 100 per cent over the previous year. Business of the post office for the fiscal year ended June 30, 1935 practically doubled again over the previous year. This, however, does not accurately indicate the normal increase, as it includes the sale of approximately \$5,000 worth of Yellowstone Park 5-cent postage stamps, of the National Park series, to collectors on July 30, 1934. Leaving out this unusual sale, the increase in receipts was approximately 50 per cent.

The initial sale of the Yellowstone Park stamps, held on July 30, 1934 was notable in that it was attended by Postmaster General Farley, and other officials of the Post Office Department, and of other departments, stamp collectors, representatives of the press, etc.

Postmaster Chester A. Lindsley was retired at his own request, effective at the close of the fiscal year 1935, so as to take advantage of the retirement clause in the Independent Offices Bill which permits retirement under certain conditions at 60 years of age with 30 years service. Claude W. Anthony, who has been a clerk in the office for the past year, was appointed Acting Postmaster.

Bureau of Public Roads: The major highway work in Yellowstone Park, which is under the supervision of the Bureau of Public Roads, included during the past year 80 miles of grading under seven contracts; two plant mix bituminous surfacing projects, approximately 32 miles in length; one seal coat project, approximately 24 miles in length; one base course surfacing project from Lava Creek to Mammoth on the Tower Junction-Mammoth road and five bridge contracts for the construction of 18 bridges. There is also one Approach Road project on the East Entrance highway consisting of 12.3 miles of grading and including minor structures.

The above work represents contracts involving about three million dollars, and the expenditure during the past fiscal year of about one million dollars.

Most of the grading projects with the exception of the East Entrance approach road will be completed by the end of the 1935 construction season. One plant mix bituminous surfacing project, N.R. 1-Al, A3, A4, A5, extending from Mammoth to Obsidian, should be completed by October, 1935 and the five bridge contracts will be completed in the late fall of 1935.

It is expected that the PEC Section "A" project of the East Entrance Approach road and N.R. 1-G1, G2, G3 bituminous surfacing project, Canyon Junction-Tower Junction, will not be completed until the 1936 construction season.

Weather Bureau: This 12 months period differs markedly from the corresponding period one year earlier, which included the warmest winter in the local records and a total snowfall little over half the normal amount.

Temperatures averaged  $39.9^{\circ}$  for the twelve months, or  $0.5^{\circ}$  above normal. In the last preceding 12-month period the average was  $44.0^{\circ}$ , or  $4.1^{\circ}$  higher than in the period just completed. Beginning with July, each month, excepting September, until (and including) February, was warmer than normal, although no monthly mean temperatures broke records. September was a relatively cold month, its mean temperature being  $47.2^{\circ}$ , or  $6.2^{\circ}$  below the normal for the month, the widest departure from normal for any of these twelve months. Each month from March to June, inclusive, was below normal. August, November, and June were warmer than the same months a year earlier; all other months were cooler. The extreme temperatures were a maximum of  $88^{\circ}$  on July 28, and a minimum of  $-34^{\circ}$  on January 20, a range of 122 degrees. The only notable new temperature records established were a new low extreme for April,  $-5^{\circ}$ , which occurred on the first, and a mean of  $21.4^{\circ}$  for the first seven days of April, making this the coldest April week in the records. October mean temperature was only  $0.2$  degrees lower than that of October, 1933, the warmest October. Thirty-one days had maximum temperatures of  $80.0^{\circ}$  or higher; 206 had minima of  $32.0^{\circ}$  or lower; and 11 had minima of zero or lower.

Total precipitation was 11.85 inches, or 6.19 inches less than normal. In the immediately preceding twelve months the total was 13.90 inches, yet in the earlier period indicated only August, September, December, and June had greater monthly totals than the same months in the present period. Every month except April had less than normal precipitation in the year ending June 30, 1935, while in the preceding year three months, August, September, and June were above normal. Following June, 1934, which set a new

record with 3.48 inches, June, 1935, with 0.46 inch, was one of the driest of Junes, only two having had less rain.

Partially offsetting the light precipitation, the winter's snowfall was heavy. The total amount, 123.6 inches, has been exceeded but four times. Both September, with 8.5 inches, and April, with 23.7 inches, established new snowfall records. The greatest 24-hour snowfall was 7.0 inches, in September; the greatest average depth on the ground at any time was 13.4 inches, in April.

There were 153 days with 0.01 inch or more of precipitation; 77 clear days, 108 partly cloudy days, and 180 cloudy days. Thunderstorms occurred on 29 days. Wind velocity averaged 8.5 miles per hour, with southwest the generally prevailing direction.

#### MISCELLANEOUS

Vital Statistics: There were two deaths, due to accident, 2 births, and 1 marriage.

Deaths of Park Friends and Associates: Mrs. William Riley, wife of former employee William H. Riley, was killed in an automobile accident at Chelsea, Iowa in August while Mr. Riley and his family were returning to their old home in Pennsylvania. Mr. Riley had just retired from service with the National Park Service.

Walter Philip Martindale, former park ranger and ranger-naturalist, who made popular the "sermon on the mount" with his bear lectures at Old Faithful, died at Rapid City, South Dakota, from a heart attack on June 24.

Visitors: A list of distinguished visitors from July 1, 1934 to June 30, 1935 included:

Secretary of the Treasury Henry Morgenthau, Postmaster General James A. Farley, Director of the Budget Lewis W. Douglas, Attorney General Homer Cummings and his Assistant Harry W. Blair, U. S. Senators Robert D. Carey of Wyoming, Gerald P. Nye of North Dakota, Key Pittman of Nevada, Joseph C. O'Mahoney of Wyoming, U. S. Congressman Monrad C. Wallgren of Indiana, Arthur H. Greenwood of Indiana and Samuel P. Pettengill of Indiana and Governors Leslie A. Miller of Wyoming, Ben Ross of Idaho and Frank H. Cooney of Montana.

Other distinguished visitors included Robert Fechner, Director of ECW; Ed Hayes, National Commander of the American Legion;

Rexford G. Tugwell, Under-Secretary of Agriculture; Oscar L. Chapman, Assistant Secretary of Interior; F. S. Lowery, Assistant Director of the Budget; Arno B. Cammerer, Director of the National Park Service; John H. Edwards, former Assistant Secretary of the Interior; Major Generals John Hagood and Samuel Hof, U. S. Army; Isador Lubin, Commissioner of Labor Statistics; Eugene Black, General Land Office; Wallace Beery, famous motion picture star; Glenn S. (Pop) Warner, famous football coach; W. H. Jackson, famous pioneer photographer of the 1871 Hayden Survey party, Frank J. Gould, Capitalist; Mrs. Gerda Mundt, member of the Danish Parliament; Mrs. W. E. Borah, wife of Senator Borah; Dr. William Mayo, noted surgeon; Robert F. Phillips, Director of Rotary International and Francis H. Shoemaker of Red Wing, Minnesota, former Congressman from Minnesota.













Bound by the Western Museum Laboratories at Berkeley

Prepared at the Western Museum Laboratories of  
the National Park Service with assistance provided by  
the Work Projects Administration — Official Project  
No. 65-2-08-16, National Youth Administration and  
Civilian Conservation Corps.

